

STATE OF WASHINGTON

DEPARTMENT OF ECOLOGY

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Julyl 9, 2002

James Rasmussen
Environmental Management Division
United States Department of Energy
Office of River Protection
P.O. Box 450, MSIN: H6-60
Richland, Washington 99352



EDMC

Dear Mr. Rasmussen:

Re: Conditional Approval of the C-104 and S-112 Functions and Requirements (F&R) Documents RPP-7807, Rev 0 and Document RPP-7825, Rev 0., deliverables of HFFACO Milestone M45-03-T04 and M45-03-T03.

The Washington State Department of Ecology (Ecology) is fully supportive of the important risk reduction actions of single shell tank (SST) waste retrieval. The retrieval demonstrations are important because they will move a significant amount of high risk waste out of SSTs to double shell tanks (DSTs), and demonstrate new and improved retrieval and leak detection technologies. United States Department of Energy (USDOE) Office of River Protection (ORP) has made substantial progress toward the retrieval of SST waste over the past few years and Ecology compliments the ORP commitment to SST waste retrieval. Due to this effort, the actual moving of waste from old failing storage tanks to safer tanks is just around the corner.

Ecology has completed the review of the C-104 and S-112 F&R document and has decided to issue a conditional approval of the document. Ecology approves the technical approach for final retrieval design for tanks C-104 and S-112. ORP should consider this letter as approval to continue with final design. Recognizing the need for continued progress toward SST waste retrieval and, while acknowledging Ecology concerns about the limitations of this first preretrieval Retrieval Performance Evaluation (RPE), Ecology will not require resolution of C-104 and S-112 RPE related comments prior to conditional approval of the C-104 and S-112 F&R document. Non-RPE F&R comments identified in the review-comment-records (RCRs) must be resolved. These comments include, but are not limited to a lack of sufficient leak detection, mitigation and monitoring (LDMM), and unacceptably large leak loss volumes. Removal of mixed waste from non-compliant single walled tanks is a key step towards a required final tank system closure. Ecology continues to support retrieval of as much tank waste as technically possible, as defined in the Hanford Federal Facility Agreement and Consent Order (HFFACO)

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M-45 Milestones, and will not impede progress toward that goal. Therefore, Ecology approves the above referenced F&R documents subject to the following conditions:

The conditions for approval are as follows:

- 1. Resolve all non-RPE specific RCR comments and submit related corrections, missing information, etc. to Ecology's satisfaction no later than three weeks after the receipt of this letter. This includes providing plans to Ecology for groundwater monitoring and dry well logging for the periods prior to, during, and following retrieval.
- 2. Ecology requires all RPE related corrections, requested changes, and additional information, etc., as appropriate/applicable to other tanks/tank farms, be incorporated into all future RPE and SST Closure documentation. To this end, Ecology and ORP need to meet and develop agreements concerning level of risk analysis needed for retrieval actions, level of risk analysis needed for individual tank closure/HFFACO appendix H determinations, and level of risk analysis needed for tank farm closure.
- 3. Ecology understands that ORP is currently planning field testing ex-tank LDMM technologies and plans to deploy an ex-tank technology at S-112 and then at C-104 if the technologies prove to add value. Ecology requires that ORP maintain design flexibility to incorporate at least one viable ex-tank LDMM technology for each retrieval. Ecology expects that ORP will continue to seek out and invest in technology to improve the capability to detect and mitigate leaks during retrieval.
- 4. The March 2002 construction project schedule indicated technology insertion points (TIP) for LDMM in May 2002 (preliminary design) and March 2002 (final design) for C-104. Within two weeks of receipt of this letter, USDOE will provide Ecology the latest information regarding the ex-tank technology(s) USDOE chooses to incorporate into the S-112 and C-104 designs.
- 5. Ecology does not accept or approve the suggested allowable leak volume of 36,000 gallons. Ecology is concerned that the results of the screening level risk assessment for C-104 may lead to the belief that an allowable leak volume of 36,000 gallons is acceptable. DOE should make reasonable efforts to prevent leaks of any kind, regardless of what the risk assessment results show as acceptable. Ecology expects that DOE will continue to develop and implement technology to improve on the 19,000 gallon detection limit specified for C-104 and the 8,000 gallon detection limit specified for S-112, both of which are based on in-tank/in-line methodology. Ecology's position is that leak detection should be based on the limits of best available technology, not risk.

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6. Ecology shall be included in the process control program, including the development of process controls and review of documentation.

Ecology and DOE need to resolve the issues relating to retrieval leak loss. The use of a risk analysis to determine risk to human health and the environment for a range of retrieval leak volumes has some value; however, calculating a risk-based maximum leak loss used to determine leak detection limits and related detection equipment is not acceptable. There is no regulatory basis for this concept. The goal of leak detection shall be to detect the smallest leak volume practicably achievable in order to document the performance of the retrieval demonstrations, and to provide timely data from which DOE and Ecology can make informed retrieval/closure decisions. Ecology recommends that a memorandum of understanding relating to LDMM be pursued. Ecology will contact DOE representatives to resolve this issue in the near future.

If you have any questions please contact Suzanne Dahl at (509) 736-5705 or Dick Heggen at (509) 736-5716.

Sincerely

Suzanne Dahl

cc:

Joe Cruz, ORP
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Administrative Record: M45-SST Retrieval